WHAT IS CLAIMED IS:

1. A method comprising:

preparing a bonding surface of a heat dissipating member; and

bonding a thermal interface material layer including a metallic solder to the bonding surface, the thermal interface material layer to thermally couple the heat dissipating member to a heat conducting component by an impermanent attachment.

2. The method of claim 1, wherein the bonding of the thermal interface material is achieved without using a solder flux.

3. The method of claim 1, wherein the bonding of the thermal interface material comprises forming an intermetallic bond.

4. The method of claim 1, wherein the preparing of the bonding surface comprises plating the bonding surface with at least one wetting layer.

5. The method of claim 4, wherein the at least one wetting layer comprises one of Au and Ni.

6. The method of claim 1, wherein the metallic solder has a melting point that is greater than an operating temperature of the heat conducting component.

7. The method of claim 1, wherein the metallic solder comprises one of indium and an alloy thereof.

8. The method of claim 1, wherein the heat dissipating member comprises one of Cu and Al.

9. The method of claim 1, wherein the bonding comprises:

reflowing the metallic solder on at least a portion of the bonding surface to form a liquid metallic solder layer; and

allowing the liquid metallic solder layer to cool to a temperature of less than the melting point of the metallic solder.

10. The method of claim 1, wherein the bonding comprises:

placing the metallic solder and the heat dissipating member into a vacuum chamber;

placing the vacuum chamber under vacuum conditions;

heating the metallic solder to a temperature of greater than or equal to the melting point of the metallic solder to form a liquid metallic solder; and

disposing the liquid metallic solder on at least a portion of the bonding surface to form a liquid metallic solder layer.

11. The method of claim 10, further comprising providing a first inert environment in the vacuum chamber after placing the vacuum chamber under vacuum conditions.

12. The method of claim 11, further comprising providing a pressure environment in the vacuum chamber after providing a first inert environment in the vacuum chamber.

13. The method of claim 12, wherein the pressure environment is from about 15 to about 40 p.s.i.

14. The method of claim 12, further comprising:

allowing the liquid metallic solder layer to cool to a temperature of less than the melting point of the metallic solder; and

removing at least a portion of the second pressure environment from the vacuum chamber.

15. A method comprising:

placing a metallic solder and a heat dissipating member having a bonding surface into a vacuum chamber;

placing the vacuum chamber under vacuum conditions;

heating the metallic solder to a temperature of greater than or equal to the melting point of the metallic solder to form a liquid metallic solder;

providing a pressurized inert atmosphere in the vacuum chamber;

disposing the liquid metallic solder on at least a portion of the bonding surface to form a liquid metallic solder layer;

removing at least a portion of the pressurized inert atmosphere from the vacuum chamber; and

allowing the liquid metallic solder layer to cool to a temperature of less than the melting point of the metallic solder.

16. The method of claim 15, wherein the metallic solder comprises a fluxless metallic solder.

17. The method of claim 15 further comprising providing a wetting layer including one of a Au plating and a NI plating on the bonding surface prior to placing the heat dissipating member into the vacuum chamber.

18. A device comprising:

a heat dissipating member having a bonding surface; and

a thermal interface material layer including a metallic solder bonded to the bonding surface, the thermal interface material layer to provide an impermanent attachment of the thermal interface material layer to a heat conducting component.

19. The device of claim 18, wherein the metallic solder is a fluxless metallic solder.

20. The device of claim 18, wherein the metallic solder is bonded to the bonding surface by an intermetallic bond.

21. The device of claim 18, further comprising at least one wetting layer disposed on the bonding surface interposed between the heat dissipating member and the thermal interface material layer.

22. The device of claim 18, wherein the metallic solder has a melting point that is greater than an operating temperature of the heat conducting component.

23. The device of claim 18, wherein the heat dissipating member comprises one of Cu and Al.

24. The device of claim 18, wherein the heat dissipating member comprises one of a heat sink, a heat spreader, and a heat pipe, and wherein the heat conducting component comprises one of a heat spreader and a die.

25. A chip package comprising:

a heat dissipating member having a bonding surface;

at least one wetting layer disposed on at least a portion of the bonding surface; and

a thermal interface material layer including a metallic solder bonded to the bonding surface without flux.

26. The chip package of claim 25, wherein the at least one wetting layer comprises one of Au plating and Ni plating.

27. The chip package of claim 25, wherein the metallic solder comprises one of indium and an alloy thereof.

28. A computer system comprising:

a bus;

a memory coupled to the bus; and

an electronic assembly electrically connected to the bus, including:

a processor;

a primary heat removal device thermally coupled to a heat generating component of the electronic assembly by a first thermal interface material layer; and

a secondary heat removal device thermally coupled to the primary heat removal device by a second thermal interface material layer, at least one of the first and the second thermal interface material layers including a metallic solder to permanently bond to a first coupling surface and impermanently attach to a second coupling surface.

29. The computer system of claim 28, wherein the metallic solder is a fluxless solder.

30. The computer system of claim 28, wherein the permanent bond is an intermetallic bond.